

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-36, 52-87, 103-138 and 154 are pending in this application.

In the outstanding Office Action, Claims 1-4, 6-14, 16, 18-21, 24-26, 28-32, 34-36, 52-55, 57-65, 67, 69-72, 75-77, 79-83, 85-87, 103-106, 108-116, 118, 120-123, 126-128, 130-134, 136-138 and 154 were rejected as being unpatentable over Benveniste (U.S. Patent Publication No. 2003/0174690, hereinafter “Benveniste”) in view of Nyman et al. (U.S. Patent Publication No. 2003/0037033, hereinafter Nyman”) in view of Kennedy (U.S. Patent Publication No. 2004/0057409); and in further view of Liu (U.S. Patent 6,980,537); Claims 5, 15, 17, 22, 23, 27, 56, 66, 68, 73, 74, 78, 107, 117, 119, 124, 125 and 129 were rejected as being unpatentable over Benveniste in view of Nyman, Kennedy, Liu, and in further view of Khun-Jush et al. (U.S. Patent Publication No. 2005/0054294, hereinafter “Khun-Jush”); and Claims 33, 84 and 135 were rejected as being unpatentable over Benveniste in view of Nyman, Kennedy, Liu and in further view of Gubbi (U.S. Patent No. 6,934,752).

The present rejection of the claims is substantially the same as that set forth in the June 11, 2009 Office Action. All of the remarks provided in the Amendment filed September 4, 2009 are equally relevant to the present Office Action, and therefore are incorporated by reference in their entirety. The one difference is that the present Office Action adds a fourth reference, namely Liu, based on the assertion that Liu teaches that “each beacon including neighboring beacon information pertaining to beacon transmission times of neighboring communication stations”, citing column 8, lines 28-59.

As a preliminary matter, Applicant notes that the Office Action appears to include at page 3 the incorrect basis for the rejection (35 U.S.C. §102(e)), and therefore Applicant construes the rejection as being an “obviousness” rejection. On this basis, it is understood

that the Office Action is asserting that Liu when taken in combination of Benveniste in Nyman and Kennedy discloses all the elements of Claim 1, for example. Applicant respectfully traverses this assertion. Applicant agrees with the Office Action that Benveniste in Nyman and Kennedy fail to teach that each beacon includes neighboring beacon information pertaining to beacon transmission times of neighboring communication stations. However, Applicant also recognizes the Liu fails to disclose this feature as well.

Liu is directed to a method and apparatus for a communication network cluster that among other things includes, as illustrated in Figure 2, the transmission of a beacon that includes an indication of the quantity of neighbors remaining and makes time-interval adjustments between transmission of packets from the neighbors. This quantity information is transmitted in the form of “node status packets” that are transmitted by each node “including the quantity of neighboring nodes associated with that node in a listing of those neighboring nodes” (column 8, lines 34-38). Network nodes transmit a node status packet “k” at time T_k , and waits for the expiration of a time interval T_k , between T_k and the transmission time of a succeeding node status packet T_{k+1} .

The Office Action takes the liberty of asserting that the node status packet includes neighboring beacon information “pertaining to beacon transmission times of neighboring communication stations”. Applicant traverses this assertion. Liu is quite clear that the node status packet includes the quantity of neighboring nodes, but is silent with regard to including beacon transmission times of neighboring communication stations, as claimed. Instead, Liu explains at column 8, lines 53-55, that timing intervals between node status packets is set according to network conditions that are described later in the patent specification (column 8, lines 53-55). Liu initially assumes a uniform distribution between transmissions so that a current interval between transmissions T_k exists as well as an offset. When an expanded

number of nodes (neighbors) are discovered, intervals are adjusted between the transmissions to account for the increase or decrease in neighbors (column 10, lines 40-45).

However, comparing Liu with the language of Claim 1, Claim 1 requires that each beacon include neighboring beacon information pertaining to beacon transmission times of neighboring communication stations. Liu's node status packets do not contain information pertaining to beacon transmission times of neighboring communication stations. Instead, Liu is quite clear that the node status packet contains information including the quantity of neighboring nodes associated with the node and a listing of those neighboring nodes (column 8, lines 34-38). This information in the node status packets in Liu does not include information pertaining to beacon transmission times of neighboring communication stations. Instead, and as discussed in the last filed Amendment, an advantage with the approach according to the invention of Claim 1 is that an apparatus that newly joins an *ad hoc* network is able to identify the positions of the different apparatuses that are already part of the network, and assist the newly added apparatuses so as to inform the newly added apparatuses at what space the newly added apparatus should attempt to transmit the beacon and avoid collision with other beacons.

In the nonlimiting example of Figure 8C for example, a station 1 "STA1" sends beacon information for STA2 where this beacon information includes information about the beacon transmission times of STA0. As a result of conveying this information from STA1 to STA2, STA2 can now be informed about the beacon transmission timing of STA0 so that STA2 can be aware of an otherwise hidden terminal, and avoid collisions with the hidden terminal. Liu, on the other hand, with its transmission of node status packets, would not include the same information as claimed, and therefore cannot help avoid the problem of hidden terminals.

Because the Office Action recognizes that the other asserted references do not include the feature of “each beacon including neighboring beacon information pertaining to beacon transmission times of neighboring communication stations”, as claimed, and relies on Liu for this disclosure, in light of the above discussion regarding Liu’s silence regarding a fair teaching of the claimed feature discussed above, it is respectfully submitted that no matter how Liu is combined with Benveniste, Nyman and Kennedy, the combination does not teach or suggest all of the elements of Claim 1.

As this feature is found in each of the other rejected claims, it is respectfully submitted that Claims 2-36, 52-87, 103-138 and 154 also patentably define over these four references. Similarly, Khun-Jush and Gubbi are neither asserted for, nor alleged to be present in Liu, nor do they actually disclose this feature. Therefore, any combination of Khun-Jush and Gubbi with the above-described four asserted references, would not provide a fair teaching of all of the elements of the presently claimed independent claims. As such, it is respectfully submitted that neither Khun-Jush nor Gubbi cure the deficiencies discussed above with regard to the asserted references for the independent claims.

Consequently, in view of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-36, 38, 52-87, 103 and 154 patentably define over the asserted prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

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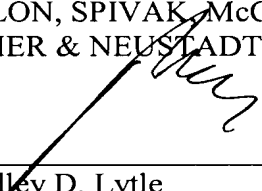
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